

**OWNERS MANUAL FOR  
PERMANENTLY LUBRICATED  
AIR COMPRESSOR**

**MODEL NO. 102D**  
*(For Home Use Only)*

Listed



721Y

Air  
Compressor

**MASTER**

**SPECIFICATION CHART**

Model No.	102D
Horsepower	3/4
SCFM @ 40 psig	2.9
SCFM @ 90 psig	2.1
Displacement CFM	4.0
Bore	1 3/4"
Stroke	1 1/4"
Voltage-Single Phase	110-120
Minimum Branch Circuit Requirement	15 AMPS
*Fuse Type	Quick Acting
Amperage at Max. Pressure	10
Tank Size	2 Gallon

\*A circuit breaker is preferred. Use only a fuse or circuit breaker that is the same rating as the branch circuit the air compressor is operated on. If the air compressor is connected to a circuit protected by fuses, use quick acting fuses.

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# SAFETY GUIDELINES

This manual contains information that is important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the following symbols. Please read the manual and pay attention to these sections.



**URGENT SAFETY INFORMATION - A HAZARD THAT WILL CAUSE SERIOUS INJURY OR LOSS OF LIFE.**



**IMPORTANT SAFETY INFORMATION - A HAZARD THAT *MIGHT* CAUSE SERIOUS INJURY OR LOSS OF LIFE.**



Information for preventing damage to equipment.



Information that you should pay special attention to.



**HAZARDS CAN OCCUR IF EQUIPMENT IS NOT USED PROPERLY.  
PLEASE READ THE FOLLOWING CHART.**

WHAT TO LOOK FOR	WHAT COULD HAPPEN	HOW TO PREVENT IT
Hot Parts	<p>When operated continuously, the air hose gets hot, especially near the compressor. If you maintain contact by grasping you may suffer minor burns or discomfort.</p> <p>On tank mounted units, the plumbing between the pump and tank gets hot.</p>	<p>Never touch the air compressor head during or immediately after operation.</p> <p>On tank mounted units, avoid prolonged contact with the pump to tank plumbing.</p>
Flammable Vapors	<p>It is normal for the motor and pressure switch to spark. A spark can ignite flammable vapors from gasoline or solvents, causing a fire or explosion.</p>	<p>The air compressor must only be used in well ventilated areas, free of gasoline or solvent vapors.</p> <p>Do not operate the compressor while you are carrying it, or in the spray area.</p>
Compressed Air	<p>Compressed air can propel dust, dirt or loose particles it comes in contact with. These propelled particles may cause serious injury or damage.</p> <p>Too much air pressure applied to air tools or accessories can cause damage or risk of bursting.</p>	<p>Never point any nozzle or sprayer toward a person or any part of the body.</p> <p>Always wear safety goggles or glasses when using the air compressor.</p> <p>Always turn the air compressor off before attaching or removing accessories.</p> <p>Check the manufacturer's pressure rating for air tools and accessories. Regulator outlet pressure must never exceed the maximum pressure rating.</p>

WHAT TO LOOK FOR	WHAT COULD HAPPEN	HOW TO PREVENT IT
Electricity	Your air compressor is powered by electricity. Like any other electrically powered device, if it is not used properly it may cause electrical shock.	Always unplug the air compressor prior to maintenance or repair.  Never use the air compressor in the rain.  Always plug the cord into an electrical outlet with the specified voltage and adequate fuse protection.
Toxic Vapors	It is normal for compressed air to contain toxic or irritating vapors. Such vapors are harmful if inhaled.  Certain materials you are spraying (like paint, weed killer, sand or insecticide) can be harmful if you inhale them.	Never directly inhale the compressed air produced by this unit.  Read labels and safety data for all materials you spray. Follow all safety precautions.  Read and follow the safety instructions provided on the label or safety data sheet for the material you are spraying. Use a respirator mask if there is a chance of inhaling anything you are spraying. Read all instructions . . . be sure that the respirator mask is suitable for your application.
Unsuitable Solvents	The solvents 1,1,1 - Trichloroethane and Methylene Chloride can chemically react with aluminum used in paint spray guns, paint pumps, etc., and cause an explosion. These solvents can also react with galvanized components and cause corrosion and weakening of parts. This does not affect your air compressor - but it may affect the equipment being used.	Read the label or data sheet supplied with the material you intend to spray. If it contains the solvents listed do not use accessories that contain aluminum or galvanized parts. You must either change the material you intend to spray, or use only stainless steel spray equipment.

## GLOSSARY

**SCFM or CFM:** Standard Cubic Feet per Minute; a unit of measurement of air delivery.

**PSIG or PSI:** Pounds per square inch gauge.

**U.L. Listed:** Underwriter Laboratories; Samples of compressor outfits, taken from production, were submitted to U.L. and found to comply with their requirements for design and performance.

## UNPACKING INSTRUCTIONS

Grasp the handle and lift the air compressor out of the carton. Remove the styrofoam and/or cardboard and discard.

## STORAGE

*When you have finished using the air compressor:*

1. Set the "ON/OFF" switch to "OFF" and unplug the cord.
2. Relieve all pressure from the air compressor head and air hose by setting the adjustable pressure valve to 10 P.S.I.
3. Protect the electrical cord and air hose from damage by winding them loosely around the air compressor.
4. Store the air compressor in a clean and dry location.

## DESCRIPTION OF OPERATION

**Air Compressor Pump:** To compress air, the piston moves up and down in the cylinder. On the down-stroke, air is drawn in through the air intake muffler (valves). The exhaust valve remains closed. On the upstroke of the piston, air is compressed. The intake valves close and compressed air is forced out through the exhaust valve and then through the air hose.

**Adjustable Pressure Valve:** The pressure valve controls the amount of pressure going from the air compressor to the accessory. The pressure adjusting valve can be used to set approximate pressure between 10 and 125 P.S.I. (125 P.S.I. is the highest pressure this compressor will deliver).

### WARNING

**ALWAYS SET THE PRESSURE VALVE AT OR BELOW THE REQUIRED PRESSURE FOR THE ACCESSORY BEING USED BEFORE STARTING YOUR COMPRESSOR. FOR INFLATION OR OTHER USES REQUIRING ACCURATE PRESSURE, USE A PRESSURE GAUGE.**

**Accumulator Tank:** Your accumulator tank is equipped with a relief (pop-off) valve to prevent an over pressure condition in the tank. This 2 gallon tank is *not* designed to store air, but rather to provide the additional volume of compressed air necessary to operate a wide variety of air tools. When starting your compressor, attach the tool to the hose, set the pressure adjusting valve at the required pressure, wait a few moments until the tank fills with air. You will know the tank is filled when you hear air bleeding through the pressure adjusting valve. Depending on the type and size of tool being used, you will occasionally need to wait for the tank to refill before continuing. When you are finished or changing tools, turn the compressor switch off and set the pressure adjusting valve to 10 PSI and wait for the tank to discharge completely.

## INSTALLATION AND BREAK-IN PROCEDURES

### Location of the Air Compressor

Your compressor comes to you completely assembled and ready for use. Operate the air compressor in a dry, clean, cool and well ventilated area. The air compressor pump and case are designed to allow for proper cooling. Clean or blow off dust or dirt that collects on the air compressor. A clean air compressor runs cooler and provides longer service. The ventilation openings on your air compressor are necessary to maintain proper operating temperature. Do not place rags or other containers on or near these openings.

### Extension Cords

Use extra air hose instead of an extension cord to avoid voltage drop and power loss to the motor.

If an extension cord must be used, be sure it is:

- a 3-wire extension cord that has a 3-blade grounding plug, and a 3-slot receptacle that will accept the plug on the compressor
- in good condition
- no longer than 50 feet
- 14 gauge (AWG) or larger. (Wire size increases as gauge number decreases.) 12 AWG, 10 AWG and 8 AWG may also be used. DO NOT USE 16 OR 18 AWG.

### Grounding Instructions

### WARNING

**IMPROPER GROUNDING CAN RESULT IN ELECTRICAL SHOCK. IN THE EVENT OF A SHORT CIRCUIT, GROUNDING REDUCES THE RISK OF SHOCK BY PROVIDING AN ESCAPE WIRE FOR THE ELECTRIC CURRENT. THIS AIR COMPRESSOR MUST BE PROPERLY GROUNDED. READ THE FOLLOWING:**

1. The air compressor is designed for 120 volt operation only and is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be used with an outlet that has been installed and grounded in accordance with all local codes and ordinances (see Figure below). The outlet must have the same configuration as the plug. **DO NOT USE AN ADAPTER.**
2. Do not modify the plug that has been provided. If it does not fit the available outlet, the correct outlet should be installed by a qualified electrician.
3. Inspect the plug and cord before each use. Do not use if there are signs of damage.

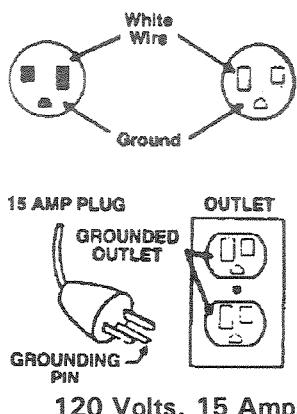
# INSTALLATION AND BREAK-IN PROCEDURES

## DANGER

RISK OF ELECTRICAL SHOCK. IF REPAIRING OR REPLACING CORD OR PLUG, THE GROUNDING WIRE MUST BE KEPT SEPARATE FROM THE CURRENT-CARRYING WIRES. NEVER CONNECT THE GROUNDING WIRE TO A FLAT BLADE PLUG TERMINAL. (THE GROUNDING WIRE HAS INSULATION WITH AN OUTER SURFACE THAT IS GREEN - WITH OR WITHOUT YELLOW STRIPES.)

If these grounding instructions are not completely understood, or if in doubt as to whether the compressor is properly grounded, have the installation checked by a qualified electrician.

### 120 Volt Models



120 Volts, 15 Amps

## Air Hose

The air hose attached to your compressor has an integral pressure adjusting valve at the working end of the hose. Should service or replacement be required, make sure that the pressure adjusting valve is present in the air hose line.

## WARNING

**DO NOT REPLACE THE HOSE WITH STANDARD HOSE THAT IS NOT EQUIPPED WITH THE PRESSURE ADJUSTING VALVE.**

## CAUTION

Do not allow hose to become kinked or pinched at any time. This is important to avoid damage to your compressor and to maintain pressure adjusting valve control.

## OPERATING PROCEDURES

1. Before plugging in the air compressor, set the adjustable pressure valve to "10" PSI. Make sure the "ON/OFF" switch is in the "OFF" position.
2. Connect the air tool or accessory to the air hose. Tighten securely.
3. Plug the power cord into the grounded outlet.
4. Start the compressor by setting the "ON/OFF" switch to the "ON" position.
5. Check the manufacturer's maximum pressure rating for the air tool, accessory or vehicle tire being used. The air compressor outlet pressure must never exceed the maximum pressure rating.
6. Slowly increase the pressure setting of the adjustable pressure valve. You should be able to hear and feel air pressure being relieved by the adjustable pressure valve. If pressure is not being relieved, turn the air compressor off immediately. The pressure valve must be replaced.

## WARNING

TOO MUCH AIR PRESSURE COULD CAUSE AN AIR TOOL OR VEHICLE TIRE TO RUPTURE OR EXPLODE. CAREFULLY FOLLOW STEPS 5 AND 6 EACH TIME YOU USE YOUR COMPRESSOR.

## CAUTION

Compressed air from the outfit may contain water condensation. Do not spray unfiltered air at an item that could be damaged. Some air operated tools or devices may require filtered air. Read the instructions for the air tool or device.

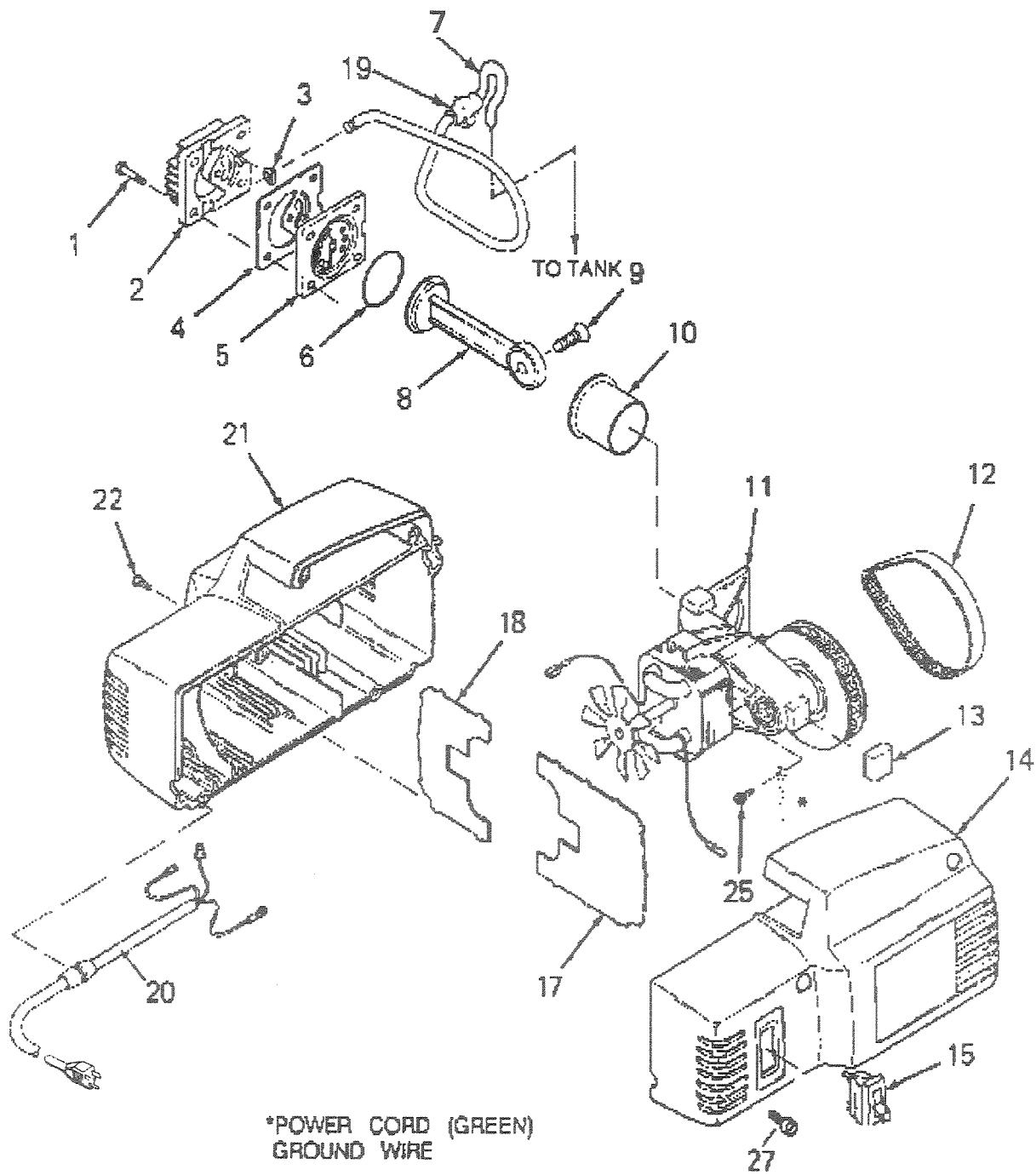
## TROUBLESHOOTING GUIDE

### WARNING

VOLTAGE SOURCES, MOVING PARTS OR COMPRESSED AIR SOURCES ARE EXPOSED WHEN REPAIRING THE COMPRESSOR. PERSONAL INJURY CAN OCCUR. UNPLUG THE COMPRESSOR BEFORE ATTEMPTING ANY REPAIRS.

	PROBLEM	CAUSE
Air Leaks	Hose fitting loose.	Tighten fitting.
	Prolonged excessive use of air.  Hole in hose.	Decrease the amount of air usage. Your compressor is not large enough for the air requirement.  Replace the hose.
	Air leaks.	Tighten fittings.
Motor will not run.	Fuse blown, circuit breaker tripped.     Extension cord is wrong length or gauge.  Loose electrical connections.  Faulty motor.	<ol style="list-style-type: none"><li>1. Check fuse box for blown fuse and replace as necessary. Reset circuit breaker. Do not use a fuse or circuit breaker with higher rating than that specified for your particular branch circuit.</li><li>2. Check for proper fuse. You should be using a Quick Acting fuse.</li><li>3. Check for low voltage problem.</li><li>4. Check the extension cord.</li><li>5. Disconnect the other electrical appliances from circuit or operate the compressor on its own branch circuit.</li></ol> <p>Check the extension cord.</p> <p>Check wiring connection inside terminal box</p> <p>Have checked at a local Service Center.</p>
High discharge pressure. Cannot be adjusted lower.	Adjustable pressure valve not functioning.	<p><b>WARNING</b></p> <p>RISK OF BURSTING. DO NOT OPERATE THE COMPRESSOR IF THIS PROBLEM EXISTS. ADJUSTABLE PRESSURE VALVE MUST BE REPLACED.</p>

# Air Compressor Diagram



Slide #19 over #7 as shown. Make sure that no part of #7 tube touches #21 or #14 shroud when assembled.

# Parts List

KEY NO.	PART NUMBER	DESCRIPTION
/ 1	SSF-995	Screw #10-24 x 7/8 LG hex head thd. forming (4 required)
2	CAC-1196	Cylinder Head
* 3	CAC-1212	Tube Seal
* 4	CAC-1199	Head Gasket
5	CAC-4323	Valve Plate Assembly
* 6	SSG-8169	"O" Ring
7	CAC-1289	Outlet Tube
+ 8	CAC-4325	Rod Assembly
/ 9	SSF-3147	Screw 3/8-16 x 1/25 LG hex socket flat head
+ 10	CAC-1205	Cylinder Sleeve
11	CAC-4327	Endbell Assembly
12	CAC-1207	Timing Belt
* 13	CAC-1213	Pump Isolator (5 required)
14	DAC-163	Shroud (right)
15	SSS-16	Switch
* 16	CAC-1254	Tank Isolator (4 required)
> 17	CAC-1202	Motor Baffle (right)
> 18	CAC-1203	Motor Baffle (left)
19	CAC-1285	Isolator (tube)
20	CAC-4322-1	Cord Assembly
21	DAC-162	Shroud (left)
/ 22	SSF-997	Screw #10-9 x 1/2 LG Phillips head thd. forming (5 required)
23	CAC-1206	Clamp
24	CAC-4324	Pressure Valve Assembly
/ 25	SSF-993	Screw, Ground #8-32 x 3/8 LG slotted hex head thd. forming

\* KK-4949 Isolator Kit includes Items 3, 4, 6, 13, 16, 34, 35, 36, 37, 27

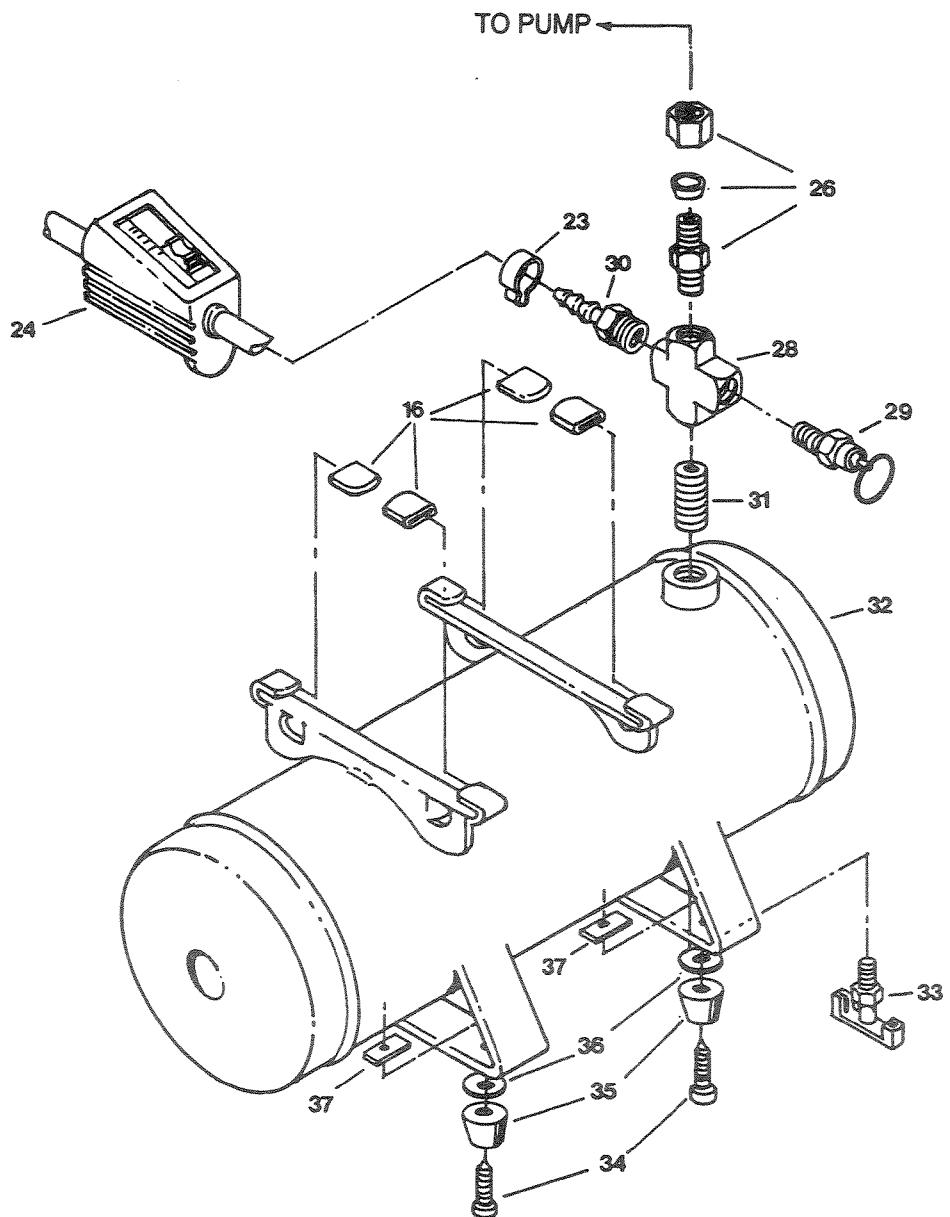
/ KK-4929 Fastener Kit includes items 1, 9, 22, 25.

> KK-4980 Baffle Kit includes items 17, 18.

+ KK-4926 Connecting Rod Kit includes items 8, 10.

KK-4998 Label Kit (9 labels)

# Compressor Pump Diagram



## Parts List

KEY NO.	PART NUMBER	DESCRIPTION
26	SSP-6102	Male Connector
* 27	SSF-3151	Screw (tank retention) (as required)
28	SSP-3305-NI	Pipe Cross
29	TIA-4150	Safety Valve
30	H-2105	Hose Connection
31	SS-1286	Nipple
32	TA-4225	Air Receiver Assembly
33	SS-2707	Drain Cock
* 34	SSF-983-ZN	Screw, self tapping
* 35	SST-5309	Recess Bumper
* 36	CAC-1277	Spacer
* 37	SSF-8146	Speed Nut

\* KK-4949 Isolator Kit includes items 3, 4, 6, 13, 16, 34, 35, 36, 37, 27

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**MODEL NO. 102D**  
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**MODEL NO.**

The model number of your Air Compressor can be found on the label which is located on the back of the shroud.

**HOW TO ORDER  
REPAIR PARTS**

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

• PART NUMBER	• PART DESCRIPTION
• MODEL NUMBER	• NAME OF ITEM

Call 1-800-635-1637 for the location of the nearest Service Center.

**WARRANTY**

This product is covered by the DeVilbiss one year limited warranty. See SP-100-A, which is available upon request.